

Sheet 1 of 10

Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. ISIS-5425	Application No. 10/755,166
	Applicant Muthiah Manoharan, et al.	
	Filing Date January 9, 2004	Group Not Yet Assigned
	Confirmation No. Not Yet Assigned	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	1	Asseline, U. et al., "Solid-Phase Preparation of 5'-3'-Heterobifunctional Oligodeoxyribonucleotides Using Modified Solid Supports," <i>Tetrahedron</i> 1992, 48, 1233-1254
	2	Asseline, U. et al., "Nucleic acid-binding molecules with high affinity and base sequence specificity: Intercalating agents covalently linked to oligodeoxynucleotides," <i>Proc. Natl. Acad. Sci. USA</i> 1984, 81, 3297-3301
	3	Atherton, E. et al., <u>The Peptides</u> , Gross and Meienhofer, Eds, Academic Press; New York, Vol. 9:1-38, 1983
	4	Baker, B.F., "Decapitation of a 5'-Capped Oligoribonucleotide by o-Phenanthroline: CU(II)," <i>J. Am. Chem. Soc.</i> 1993, 115, 3378-3379
	5	Beaucage, S. et al., "Advances in the Synthesis of Oligonucleotides by the Phosphoramidite Approach," <i>Tetrahedron</i> 1992, 48, 2223-2311
	6	Bennett, C.F. et al., "Cationic Lipids Enhance Cellular Uptake and Activity of Phosphorothioate Antisense Oligonucleotides," <i>Molecular Pharmacology</i> 1991, 41, 1023-1033
	7	Betebenner, D.A., et al., "Hepatobiliary Delivery of Polyaminopolycarboxylate Chelates: Synthesis and Characterization of a Cholic Acid Conjugate of EDTA and Biodistribution and Imaging Studies with Its Indium-111 Chelate", <i>Bioconjugate Chem.</i> 1991, 2, 117-123
	8	Bischoff, R. et al., "Introduction of 5'-Terminal Functional Groups into Synthetic Oligonucleotides for Selective Immobilization," <i>Analy. Biochem.</i> 1987, 164, 336-344
	9	Blackburn, G. et al., "Studies in Phosphorylation. Part XXIX. The Synthesis of Dialkyl Phosphates from Monoalkyl Phosphonates: Direct Oxidative Esterification", <i>J. Chem. Soc.</i> 1966, 239-245
	10	Chiang, M.-Y. et al., "Antisense Oligonucleotides Inhibit Intercellular Adhesion Molecule 1 Expression by Two Distinct Mechanisms", <i>J. of Biol. Chem.</i> 1991, 266, 18162-18171
EXAMINER		DATE CONSIDERED 5/24/05



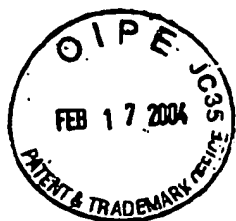
Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office		Docket No. ISIS-5425	Application No. 10/755,166
		Applicant Muthiah Manoharan, et al.	
		Filing Date January 9, 2004	Group Not Yet Assigned
		Confirmation No. Not Yet Assigned	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
M	11	Chollet, A., "Selective Attachment of Oligonucleotides to Interleukin-1 beta and Targeted Delivery to Cells", <i>Nucleosides & Nucleotides</i> 1990, 9, 957-966	
	12	Cohen, J. in <i>Oligonucleotides: Antisense Inhibitors of Gene Expression</i> , CRC Press, Inc., Boca Raton, FL, pp. 1-255, 1989	
	13	Corey, D. et al., "Sequence-Selective Hydrolysis of Duplex DNA by an Oligonucleotide-Directed Nuclease", <i>J. Am. Chem. Soc.</i> 1989, 111, 8523-8525	
	14	Corey, D. et al., "Generation of a Hybrid Sequence-Specific Single-Stranded Deoxyribonuclease", <i>Science</i> 1987, 238, 1401-1403	
	15	Damha, M. et al., "An Improved Procedure for Derivatization of Controlled-Pore Glass Beads for Solid- Phase Oligonucleotide Synthesis", <i>Nuc. Acids Res.</i> 1990, 18, 3813-3821	
	16	Delgado, C. et al., "The Uses and Properties of PEG-Linked Proteins", <i>Critical Reviews in Therapeutic Drug Carrier Systems</i> 1992, 9, 249-304	
	17	Dingwall, C., et al., "Protein Import Into the Cell Nucleus", <i>Ann. Rev. Cell Biol.</i> 1986, 2, 367-90	
	18	DiZio, J. et al., "Progestin-Thenium Complexes: Metal-Labeled Steroids with High Receptor Binding Affinity, Potential Receptor-Directed Agents for Diagnostic of Therapy", <i>Bioconjugate Chem.</i> 1991, 2, 353-366	
	19	Dreyer, G. et al., "Sequence-Specific Cleavage of Single-Stranded DNA: Oligodeoxynucleotide-EDTA.Fe(II)", <i>PNAS USA</i> 1985, 82, 968-972	
M	20	Egholm, M. et al., "Peptide Nucleic Acids (PNA). Oligonucleotide Analogues with an Achiral Peptide Backbone", <i>J. Am. Chem. Soc.</i> 1992, 114, 1895-1897	
EXAMINER		DATE CONSIDERED 5/24/08	



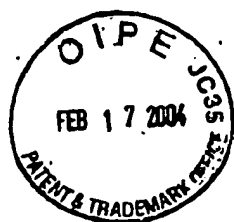
Form PTO-1449 Modified		Docket No. ISIS-5425	Application No. 10/755,166
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)		Applicant Muthiah Manoharan, et al.	
U.S. Department of Commerce Patent and Trademark Office		Filing Date January 9, 2004	Group Not Yet Assigned
		Confirmation No. Not Yet Assigned	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	21	Ferentz, A.E. and Verdine, G.L., "Disulfide Cross-Linked Oligonucleotides", <i>J. Am. Chem. Soc.</i> 1991 , <i>113</i> , 4000-4003	
	22	Fidanza, J. et al., "Site-Specific Labeling of DNA Sequences Containing Phosphorothioate Diesters", <i>J. Am. Chem. Soc.</i> 1992 , <i>114</i> , 5509-5517	
	23	Fidanza, J. et al., "Use of a Thiol Tether for the Site-Specific Attachment of Reporter Groups of DNA", <i>J. Org. Chem.</i> 1992 , <i>57</i> , 2340-2346	
	24	Froehler, B. et al., "Synthesis of DNA via Deoxynucleoside H-Phosphonate Intermediates", <i>Nucleic Acids Research</i> 1986 , <i>14</i> , 5399-5407	
	25	Gaur, R. et al., "A Simple Method for the Introduction of Thiol Group at 5'-Termini of Oligodeoxynucleotides", <i>Nuc. Acids Res.</i> 1989 , <i>17</i> , 4404	
	26	Greene et al., <i>Protective Groups in Organic Synthesis</i> , 2d edition, New York, John Wiley & Sons, pp. 178-223, 1991	
	27	Greenfield, L. et al., "Thiol-Containing Cross-Linking Agent with Enhanced Steric Hindrance", <i>Biodonjugate Chem.</i> 1990 , <i>1</i> , 400-410	
	28	Guerra, F.I. et al., "Synthetic 7-Glucosyl Phospholipid as a Drug Transport System", <i>Tetrahedron Letters</i> 1987 , <i>28</i> , 3581-3584	
	29	Haralambidis J., et al., "Preparation of Base-modified Nucleosides Suitable for Non-Radioactive Label Attachment and Their Incorporation Into Synthetic Oligodeoxyribonucleotides", <i>Nucleic Acids Research</i> 1987 , <i>15</i> , 4857-4876	
	30	Haralambidis, J. et al., "The Solid Phase Synthesis of Oligonucleotides containing a 3'-Peptide Moiety", <i>Tetrahedron Letters</i> 1987 , <i>28</i> , 5199-5202	
EXAMINER		DATE CONSIDERED 5/24/05	



Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office		Docket No. ISIS-5425	Application No. 10/755,166
		Applicant Muthiah Manoharan, et al.	
		Filing Date January 9, 2004	Group Not Yet Assigned
		Confirmation No. Not Yet Assigned	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	31	Harris, C. et al., "New Strategy for the Synthesis of Oligodeoxynucleotides Bearing Adducts at Exocyclic Amino Sites of Purine Nucleosides", <i>J. Am. Chem. Soc.</i> 1991 , <i>113</i> , 4328-4329	
	32	Iyer, R. et al., "3H-1, 2-Benzodithiole-3-one, 1,1,-Dioxide as an Improved Sulfurizing Reagent in the Solid-Phase Synthesis of Oligodeoxyribonucleoside Phosphorothioates", <i>J. Am. Chem. Soc.</i> 1990 , <i>112</i> , 1253-1254	
	33	Jablonski, E. et al., "Preparation of Oligodeoxynucleotide-Alkaline Phosphatase Conjugates and Their Use as Hybridization Probes", <i>Nucleic Acid Research</i> 1986 , <i>14</i> , 6115-28	
	34	Juby, C.D., et al., "Facile Preparation of 3'Oligonucleotide-Peptide Conjugates", <i>Tetrahedron Letters</i> 1991 , <i>32</i> , 879-882	
	35	Krieg, A.M., et al., "Uptake of Oligodeoxyribonucleotides by Lymphoid Cells Is Heterogeneous and Inducible", <i>Antisense Resea and Development</i> 1991 <i>1</i> , 161-171	
	36	Lemaitre, M. et al., "Specific Antiviral Activity of a Poly(L-lysine)-Conjugated Oligodeoxyribonucleotide Sequence Complementary to Vesicular Stomatitis Virus N Protein mRNA Initiation Site", <i>PNAS USA</i> 1987 , <i>84</i> , 648-652	
	37	Leonetti, J.P. et al, "Biological Activity of Oligonucleotide-Poly(L-lysine) Conjugates: Mechanism of Cell Uptake", <i>Bioconjugate Chem.</i> 1990 , <i>1</i> , 149-153	
	38	Letsinger, R.L., et al., "Cholesteryl-Conjugated Oligonucleotides: Synthesis, Properties, and Activity as Inhibitors of Replication of Human Immunodeficiency Virus in Cell Culture", <i>Proc. Natl. Acad. Sci. USA</i> 1989 , <i>86</i> , 6553-6556	
	39	MacMillan, A., et al., "Synthesis of functionally tethered oligodeoxynucleotides by the convertible nucleoside approach," <i>J. Org. Chem.</i> , 1990 , <i>55</i> , 5931-5933	
		40	Manoharan, M. et al., "Novel Functionalization of the Sugar Moiety of Nucleic Acids For Multiple Labeling in the Minor Groove", <i>Tetra.Ltrs.</i> 32:7171-7174 (1991)
EXAMINER		DATE CONSIDERED 5/24/05	



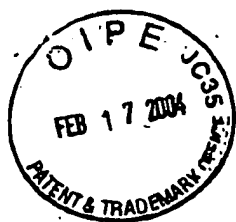
Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. ISIS-5425	Application No. 10/755,166
	Applicant Muthiah Manoharan, et al.	
	Filing Date January 9, 2004	Group Not Yet Assigned
	Confirmation No. Not Yet Assigned	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
41	Miller, P.S., et al., "A new approach to Chemotherapy Based on Molecular Biology and Nucleic Acid Chemistry: Matagen: Masking Tape for Gene Expression", <i>Anti-Cancer Drug Design</i> , 1987, 2, 117-128	
42	Mirabelli, C.K., et al., "In vitro and in vivo pharmacologic activities of antisense oligonucleotides," <i>Anti-Cancer Drug Design</i> , 1991, 6, 647-661	
43	Mori, K., et al., "Synthesis and Properties of Novel 5'-Linked Oligos," <i>Nucleosides & Nucleotides</i> , 1989, 8, 649-657	
44	Nelson, P., et al., "Bifunctional Oligonucleotide Probes Synthesized Using a Novel CPG Support Are Able to Detect Single Base Pair Mutants," <i>Nuc. Acids Res.</i> , 1989, 17, 7187-7194	
45	Ochi, T., et al., "Synthesis and Antitumor Activity of Poly(Ethylene Glycol)s Linked to 5-Fluorouracil Via a Urethan or Urea Bond," <i>Drug Design and Discovery</i> , 1992, 9, 93-105	
46	Ramirez, F. et al., "Nucleotidophospholipids: Oligonucleotide Derivatives with Membrane-Recognition Groups", <i>J. Am. Chem. Soc.</i> 1982, 104, 5483-5486	
47	Ravasio, N. et al., "Selective Hydrogenations Promoted by Copper Catalysts. 1. Chemoselectivity, Regioselectivity, and Stereoselectivity in the Hydrogenation of 3-Substituted Steroids", <i>J. Org. Chem.</i> 1991, 56, 4329-4333	
48	Shea, R. et al., "Synthesis, Hybridization Properties and Antiviral Activity of Lipid-Oligodeoxynucleotide Conjugates", <i>Nuc. Acids Res.</i> 1990, 18, 3777-3783	
49	Sinha, N.D. et al., "The Preparation and Application of Functionalized Synthetic Oligonucleotides: III. Use of H-Phosphonate Derivatives of Protected Amino-Hexanol and Mercapto-Propanol or -Hexanol", <i>Nucleic Acids Res.</i> 1988, 16, 2659-2669	
50	Sluka, J. et al., "Reagents and Methods for the Solid-Phase Synthesis of Protein-EDTA for Use in Affinity Cleaving", <i>J. Am. Chem. Soc.</i> 1990, 112, 6369-6374	
EXAMINER		DATE CONSIDERED 6/24/05



Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office		Docket No. ISIS-5425	Application No. 10/755,166
		Applicant Muthiah Manoharan, et al.	
		Filing Date January 9, 2004	Group Not Yet Assigned
		Confirmation No. Not Yet Assigned	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	51	Smith-Jones, P. et al., "Antibody Labeling with Copper-67 Using the Bifunctional Macrocycle 4-((1,4,8,11-Tetraazacyclotetradec-1-yl)methyl)Benzoic Acid", <i>Bioconjugate Chem.</i> 1991, 2, 415-421	
	52	Solomons, T.W. et al., <i>Organic Chemistry</i> , John Wiley & Sons, New York, pp. 818-819, 1980	
	53	Sproat, B. et al., "The Synthesis of Protected 5'-Mercapto-2',5'-Dideoxyribonucleoside-3'-O-Phosphoramidites; Uses of 5'-Mercapto-Oligodeoxyribonucleotides", <i>Nucleic Acids Res.</i> 1987, 15, 4837-4848	
	54	Stein, C. et al., "Antisense Oligonucleotides as Therapeutic Agents--Is the Bullet Really Magical?" <i>Science</i> 1993, 261, 1004-1012	
	55	Telser, J. et al., "Synthesis and Characterization of DNA Oligomers and Duplexes Containing Covalently Attached Molecular Labels: Comparison of Biotin, Fluorescein, and Pyrene Labels by Thermodynamic and Optical Spectroscopic Measurements", <i>J. Am. Chem. Soc.</i> 1989, 111, 6966-6976	
	56	Tseng, B. et al., "Antisense Oligonucleotide Technology in the Development of Cancer Therapeutics", <i>Cancer Gene Therapy</i> 1994, 1(1), 65-71	
	57	Uhlmann, E. and A. Peyman, "Antisense Oligonucleotides: A New Therapeutic Principle," <i>Chem. Rev.</i> 1990, 90, 543-584	
	58	Vasseur, J. et al., "Oligonucleosides: Synthesis of a Novel Methylhydroxylamine-Linked Nucleosides Dimer and its Incorporation into Antisense Sequences", <i>J. Am. Chem. Soc.</i> 1992, 114, 4006-4007	
	59	Veber, D. et al., "Isonicotinyloxycarbonyl, a Novel Amino Protecting Group for Peptide Synthesis", <i>J. Org. Chem.</i> 1977, 42, 3286-3288	
	60	Wagner, D. et al., "Preparation and Synthetic Utility of Some Organotin Derivatives of Nucleosides", <i>J. Org. Chem.</i> 1974, 39, 24-30	
EXAMINER 		DATE CONSIDERED 5/24/05	



Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office		Docket No. ISIS-5425	Application No. 10/755,166
		Applicant Muthiah Manoharan, et al.	
		Filing Date January 9, 2004	Group Not Yet Assigned
		Confirmation No. Not Yet Assigned	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	61	Wychowski, C. et al., "The Intranuclear Location of Simian Virus 40 Polypeptides VP2 and VP3 Depends on a Specific Amino Acid Sequence", <i>J. Virol.</i> 1987, 61, 3862-3869	
	62	Yamana, K. et al., Synthesis of Oligonucleotide Derivatives with Pyrene Group at Sugar Fragment", <i>Tetrahedron Lett.</i> 1991, 32, 6347-6350	
	63	Yamana, K. et al., "Synthesis and Interactive Properties of an Oligonucleotide with Anthraquinone at the Sugar Fragment", <i>Bioconjugate Chem.</i> 1990, 1, 319-324	
	64	Yoneda, Y. et al., "Synthetic Peptides Containing a Region of SV40 Large T-Antigen Involved in Nuclear Localization Direct the Transport of Proteins Into the Nucleus", <i>Experimental Cell Research</i> 1987, 170, 439	
	65	Zhang, Z. and McCormick, "Uptake of N-(4'-pyridoxyl)amines and Release of Amines by Renal Cells: A Model for Transporter-Enhanced Delivery of Bioactive Compounds", <i>PNAS USA</i> 1991, 88, 10407-10410	
	66	Zuckermann, R. et al., "Site-Selective Cleavage of RNA by a Hybrid Enzyme", <i>J. Am. Chem. Soc.</i> 1988, 110, 1614-1615	
	67	Zuckermann et al., "Efficient Methods for Attachment of Thiol Specific Probes to The 3'-Ends of Synthetic Oligodeoxyribonucleotides", <i>Nucleic Acids Research</i> 1987, 15, 5305-5320	
	68	Englisch, U. et al., "Chemically Modified Oligonucleotides as Probes and Inhibitors", <i>Angew. Chem. Int. Ed. Eng.</i> , 1991, 30, 613-629	
	69	Manoharan, et al., "Novel Functionalization of the Sugar Moiety of Nucleic Acids for Multiple Labeling in the Minor Groove," <i>Tetrahedron Letters</i> , 1991, 32, 7171	
	70	Goodchild, "Conjugates of Oligonucleotides and Modified Oligonucleotides: A Review of Their Synthesis and Properties," <i>Bioconjugate Chemistry</i> , 1990, 1, 165	
EXAMINER		DATE CONSIDERED 5/24/05	



Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office		Docket No. ISIS-5425	Application No. 10/755,166
		Applicant Muthiah Manoharan, et al.	
		Filing Date January 9, 2004	Group Not Yet Assigned
		Confirmation No. Not Yet Assigned	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
2	71	Monoharan, et al., "Chemical Modifications to Improve Uptake and Bioavailability of Antisense Oligonucleotides," <i>Database Embase Elsevier Science Publishers</i> , 1992, 660, 306 (abstract)	
	72	Caruthers, "Synthesis of oligonucleotides and oligonucleotide analogues," <i>Antisense inhibitors of gene expression</i> , J.S. Cohen (ed.), <i>CRC Press, Boca Raton, FL.</i> , 1989, 7-24	
	73	Mitchell, et al., "Boron trifluoride-methanol complex as a non-depurinating detritylating agent in DNA synthesis," <i>Nucleic Acids Research</i> , 1990, 18(17), page 5321	
	74	Schwartz, et al., "The DNA bending by acetylaminofluorene residues and by apurinic sites," <i>J. Mol. Biol.</i> , 1989, 207, 445-450	
	75	Sigman, D.S., "Nuclease activity of 1,10-phenanthroline-copper ion," <i>Acc. Chem. Res.</i> , 1986, 19, 180-186	
	76	Meyer, R. et al., "Efficient, Specific Cross-Linking and Cleavage of DNA by Stable, Synthetic Complementary Oligodeoxynucleotides", <i>J. Am. Chem. Soc.</i> 1989, 111, 8517-8519	
	77	Pidgeon, C. et al., "Synthesis and Liposome Encapsulation of Antisense Oligonucleotide-Intercalator Conjugates, <i>Annals New York Academy of Sciences</i> pp. 593-596	
	78	Sigman, D.S., "Chemical Nucleases", <i>Biochemistry</i> 1990, 29, 9097-9105	
EXAMINER		DATE CONSIDERED 5/24/05	



Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. ISIS-5425	Application No. 10/755,166
	Applicant Muthiah Manoharan, et al.	
	Filing Date January 9, 2004	Group Not Yet Assigned
	Confirmation No. Not Yet Assigned	

U. S. PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Name	Class	Subclass
u	79	3,687,808	08/29/82	Merigan, Jr. et al	195	28
	80	4,910,300	03/20/90	Urdea et al.	536	287
	81	4,958,013	09/18/90	Letsinger	536	27
	82	5,578,718	11/26/96	Cook, et al.	536	27.21
	83	5,108,921	04/28/92	Low, et al.	435	240.1
	84	5,296,350	03/22/94	Rokita, et al.	435	6
	85	5,470,967	11/28/95	Huie, et al.	536	24.3
	86	5,015,733	05/14/91	Smith, et al.	536	23
	87	5,466,786	11/14/95	Buhr, et al.	536	26.26
u	88	5,416,203	05/16/95	Letsinger	536	25.34
EXAMINER <i>[Signature]</i>			DATE CONSIDERED <i>5/24/05</i>			



Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. ISIS-5425	Application No. 10/755,166
	Applicant Muthiah Manoharan, et al.	
	Filing Date January 9, 2004	Group Not Yet Assigned
	Confirmation No. Not Yet Assigned	

FOREIGN PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
u	89	251283	07/01/8	EPO		X
	90	WO 86/02929	22/05/6	PCT		X
	91	WO 90/10448	20.09.90	PCT		X
	92	WO 92/05186	02.04.93	PCT		
	93	WO 89/02931	06.04.89	PCT		
	94	WO 91/15500	17/10/91	PCT		X
	95	WO 91/00243	10/01/91	PCT		X
u	96	WO 91/14696	11/03/91	PCT		
EXAMINER				DATE CONSIDERED		